

IDAHO DEPARTMENT OF FISH AND GAME

Virgil Moore, Director

Surveys and Inventories

FY2017 Statewide Report



Migratory Birds Fall and Winter Surveys, Production, and Harvest
(October 2016-March 2017),

Migratory Birds Spring Surveys and Summer Banding
(April 2017-September 2017)

Prepared by:

Wayne Wakkinen.....	Panhandle Region
Clay Hickey	Clearwater Region
Rick Ward	Southwest (Nampa) Region
Regan Berkley.....	Southwest (McCall) Region
Mike McDonald.....	Magic Valley Region
Zach Lockyer	Southeast Region
Curtis Hendricks	Upper Snake Region
Greg Painter	Salmon Region
David Smith	Wildlife Bureau

Compiled and edited by: Jeffrey M. Knetter,
Upland Game & Migratory Game Bird Coordinator

2018, Boise, Idaho

Idaho Department of Fish and Game (IDFG) adheres to all applicable state and federal laws and regulations related to discrimination on the basis of race, color, national origin, age, gender, disability or veteran's status. If you feel you have been discriminated against in any program, activity, or facility of IDFG, or if you desire further information, please write to: Idaho Department of Fish and Game, PO Box 25, Boise, ID 83707 or US Fish and Wildlife Service, Division of Wildlife and Sport Fish Restoration Program, 5275 Leesburg Pike, MS: WSFR, Falls Church, VA 22041-3803, Telephone: (703) 358-2156. This publication will be made available in alternative formats upon request. Please contact IDFG for assistance.

Please note that IDFG databases containing this information are dynamic. Records are added, deleted, and/or edited on a frequent basis. This information was current as of the date of this report. Raw data do not have the benefit of interpretation or synthesis by IDFG.

IDFG requests that you direct any requests for this information to us rather than forwarding this information to third parties.

TABLE OF CONTENTS

MIGRATORY BIRDS FALL AND WINTER SURVEYS, BANDING, AND HARVEST	4
ABSTRACT.....	4
YOUTH WATERFOWL HUNT.....	4
STUDY OBJECTIVES.....	4
PROCEDURES.....	4
RESULTS	5
DUCKS (ALL SPECIES).....	5
CURRENT MANAGEMENT PLAN GOALS	5
MANAGEMENT AREAS.....	5
POPULATION SURVEYS	6
HARVEST CHARACTERISTICS.....	6
MANAGEMENT IMPLICATIONS	7
GEESE (ALL SPECIES).....	7
CURRENT MANAGEMENT PLAN GOALS	7
MANAGEMENT AREAS.....	7
POPULATION SURVEYS	8
HARVEST CHARACTERISTICS.....	8
MANAGEMENT IMPLICATIONS	9
SANDHILL CRANE.....	9
TRUMPETER SWAN.....	9
TUNDRA SWAN	10
AMERICAN COOT	10
WILSON’S SNIPE	10
MOURNING DOVE	10
CURRENT MANAGEMENT PLAN GOALS	10
MANAGEMENT AREAS.....	10
POPULATION SURVEYS	10
HARVEST CHARACTERISTICS.....	11
MANAGEMENT IMPLICATIONS	11
AMERICAN CROW	11

TABLE OF CONTENTS (Continued)

WATERFOWL PRODUCTION AND SUMMER BANDING.....	12
ABSTRACT.....	12
STUDY OBJECTIVES.....	12
PROCEDURES.....	12
REGIONAL REPORTS.....	13
DUCKS (ALL SPECIES).....	13
Panhandle Region	13
Clearwater Region	13
Southwest (Nampa) Region	14
Southwest (McCall) Region.....	14
Magic Valley Region	15
Southeast Region	15
Upper Snake Region	16
Salmon Region.....	17
GEESE (ALL SPECIES).....	18
Panhandle Region	18
Clearwater Region	18
Southwest (Nampa) Region	20
Southwest (McCall) Region.....	20
Magic Valley Region	21
Southeast Region	21
Upper Snake Region	22
Salmon Region.....	23
SANDHILL CRANE	23
CURRENT GOALS.....	24
Southwest (McCall) Region.....	24
Magic Valley Region	24
Southeast Region	25
Upper Snake Region	25
Salmon Region.....	26
TRUMPETER SWAN	26

TABLE OF CONTENTS (Continued)

Magic Valley Region	27
Southeast Region	27
Upper Snake Region	27
TUNDRA SWAN	28
AMERICAN COOT	28
WILSON’S SNIPE	28
MOURNING DOVE	29
Panhandle Region	29
Clearwater Region	29
Southwest Region	30
Magic Valley Region	30
Southeast Region	31
Upper Snake Region	31
Salmon Region.....	32
AMERICAN CROW	33
LITERATURE CITED	33
APPENDIX A.....	40

LIST OF TABLES

Table 1. Estimated waterfowl harvest numbers from USFWS waterfowl hunter survey for Idaho, 1988-present.....	34
Table 2. Ducks banded in Idaho by Department and USFWS personnel, 2017.	35
Table 3. Mallards banded in Idaho by Department personnel, 2009-Present.	35
Table 4. September aerial and ground-based counts of RMP greater sandhill cranes in eastern Idaho, 2011-present.	36
Table 5 Sandhill crane tag levels, estimated hunter participation, and harvest based on mail and telephone surveys, 2011-present.	37
Table 6. Age composition of sandhill crane harvest based on mail and telephone surveys, 2010-present.	38
Table 7. Mourning doves banded in Idaho, 2007-present.	39

STATEWIDE REPORT SURVEYS AND INVENTORY

JOB TITLE: Migratory Birds Fall and Winter Surveys, Banding, and Harvest

STUDY NAME: Migratory Birds Population Status, Trends, Use, and Habitat Studies

PERIOD COVERED: October 1, 2016 to March 31, 2017

MIGRATORY GAME BIRDS FALL AND WINTER SURVEYS, BANDING, AND HARVEST

ABSTRACT

The results of harvest surveys are summarized and discussed. The U.S. Fish & Wildlife Service (USFWS) estimated duck harvest was up 96% and goose harvest was up 63% from 2015-2016 levels. The Department discontinued a separate waterfowl harvest survey for Idaho during 2010. Beginning with the 2016-2017 hunting seasons, a new process and schedule were used for setting annual migratory bird hunting regulations. Regulatory decisions are now made using biological data observed the previous year (i.e., 2016 frameworks were established with data from spring 2015). Results from a survey of migratory game bird hunters was used to guide season-setting for the 2016-2017 waterfowl hunting seasons.

YOUTH WATERFOWL HUNT

The USFWS again offered all states the option of holding a two-day youth waterfowl hunt during the 2016-2017 season. Pacific Flyway states that chose the option were required to reduce their regular seasons by 2 days so as not to exceed the 107-day maximum length for migratory bird seasons. States were permitted to hold the hunt outside the regular season framework, but regular-season limits applied. The Commission selected the option, and chose September 24-25 for the youth hunt. It was open to youth 12-15 years-of-age and full duck (including merganser), coot, and goose limits applied to participants.

STUDY OBJECTIVES

1. Determine production and trends of resident waterfowl.
2. Estimate waterfowl harvest, hunter participation, and hunter opinions.
3. Determine waterfowl movements, distribution, and survival rates.

PROCEDURES

1. Conduct fall and winter aerial counts of waterfowl.
2. Evaluate the usefulness of fall surveys and consider new techniques to assess waterfowl numbers.
3. Conduct a telephone survey of hunting license buyers.
4. Operate check stations or field checks.
5. Band waterfowl and monitor movements and survival rates.

Harvest data were collected and analyzed by the Bureau of Wildlife. Personnel stationed in the state's 7 regions and one sub-region collected all other data.

RESULTS

DUCKS (ALL SPECIES)

Current Management Plan Goals

1. Reverse the decline in the number of duck hunters.
2. Reverse the decline in duck harvest.
3. Determine duck nesting success at least twice (every other year) on all Wildlife Management Areas (WMAs) where waterfowl production is a priority.
4. Maintain a 30% nest success for upland nesting ducks on WMAs where waterfowl production is a priority.
5. Develop and implement a predator management strategy for priority WMAs where nest success is less than 30%.
6. Establish duck production surveys in at least one region in cooperation with the USFWS.

Management Areas

Background and Management Philosophy: See the 2007 Waterfowl Annual Reports for a thorough history of the duck management areas in Idaho.

During January 2016, the Idaho Department of Fish and Game (Department) conducted a survey of migratory game bird hunters to help guide the waterfowl season-setting process for the five-year period from 2016-2020. Rather than scope limited options annually, this statistically-defensible survey provides hunter preferences within the bounds of the Federal Framework.

Beginning with the 2016-2017 hunting seasons, a new process and schedule were used for setting annual migratory bird hunting regulations. Legal, administrative, and analytical burdens associated with establishing migratory game bird hunting regulations intensified during the last decade. As a result, a process that combines early and late season meeting schedules was adopted, with modifications to Adaptive Harvest Management (AHM) frameworks. Regulatory decisions were made using biological data observed the previous year (i.e., 2016 frameworks were established with data from spring 2015).

This single process and new schedule meant season frameworks (e.g., outside dates, season lengths, bag limits) were finalized earlier, and enabled state agencies to select and publish their season dates well in advance of fall seasons. Furthermore, this process allowed the Commission to set seasons for all migratory game at the same time; consequently, all migratory game bird regulations were published in the same brochure.

For the 2016-2017 season, the USFWS offered a 107-day season for ducks, snipe, and coot statewide. The regular season was 105 days with no split, and the two-day youth waterfowl season was held September 24-25, statewide.

The description, season framework, and bag and possession limits for each Management Area are found in Appendix A.

Population Surveys

During 2010, 2 helicopter crashes occurred with Department personnel on board. In one instance, the pilot and both passengers sustained serious injuries, and in the other the pilot and both passengers were fatally injured. As a result, the Department conducted a flight safety review during which needs/risk assessment were completed. As a result, Midwinter Waterfowl surveys have not been conducted since 2011. (See Waterfowl Statewide Report 2013). In 2015, the USFWS Division of Migratory Bird Management reduced financial support for the Midwinter Waterfowl Survey, nationwide. Since then, only surveys that inform annual harvest management decisions have been conducted. Therefore, all Midwinter Waterfowl surveys have been discontinued in Idaho.

In 2015, the estimated mallard abundance was 11.6 million birds, which was similar to the 2014, and 43% above the long-term average (USFWS 2015a). Western mallards consist of 2 substocks and are defined as those birds breeding in Alaska and those birds breeding in California and Oregon. Estimates of the size of these subpopulations have varied from 0.28 to 0.84 million in Alaska since 1990 and 0.26 to 0.69 million in California-Oregon since 1992. The total population size of western mallards has ranged from 0.72 to 1.40 million. For 2015, the estimated breeding-population size of western mallards was 0.73 million (SE = 0.06 million), including 0.47 million (SE = 0.05 million) from Alaska and 0.26 million (SE = 0.03 million) from California-Oregon (USFWS 2016).

Harvest Characteristics

Telephone Survey: In an effort to reduce costs and increase efficiency, the Department discontinued annual telephone harvest surveys for waterfowl in 2010. The USFWS annually estimates statewide harvest through the Federal Migratory Game Bird Harvest Information Program Harvest (Table 1).

Federal Migratory Game Bird Harvest Information Program: The goal of the program is to obtain improved harvest estimates for all species. By federal mandate, states provide the USFWS with names and addresses of all migratory game bird hunters, from which the USFWS draws a sample of hunters to survey. The Department has complied fully with the USFWS request for information every year since the 1997-1998 season. The USFWS estimated 339,800 ducks were harvested in Idaho during the 2016-2017 hunting season, which was up 96% from 2015-2016 estimates. According to USFWS Harvest Information Program estimates, the number of active adult duck hunters in Idaho was 15,464 (Table 1). Unfortunately, the company that provided the USFWS with Idaho hunter information for the 2015-2016 season did not do so in a timely

fashion. Consequently, estimated increases in both number of hunters and associated harvest estimates are abnormally larger.

Waterfowl check stations were operated at the Boundary Creek, Pend Oreille, and Coeur d'Alene River WMAs on the opening Saturday and Sunday of the 2015-2016 duck season. A total of 68 hunters expended 110 hours of effort to harvest 185 ducks (2.7 ducks/hunter; 0.6 hours/duck). American widgeon and green winged teal comprised 36% and 30% of the harvest, respectively.

Management Implications

The Department continued to meet its 1991-1995 Waterfowl Management Plan (WMP) goals to reverse the decline in the number of duck hunters and ducks harvested. However, the WMP is outdated and may need to be updated to reflect current waterfowl management issues in Idaho.

See the 2007 Waterfowl Annual Reports for a thorough history of the Idaho migratory waterfowl stamp and how the revenue it generated was spent. Currently, there is an annual budget of \$155,700 in the Habitat Improvement Program (HIP) for waterfowl habitat improvement or enhancement.

Future management will be directed toward improving and restoring wetland habitat to attract more ducks and other wetland birds as they migrate through Idaho. Habitat improvement will seek to increase local production and improve wetland function across the landscape.

GEESE (ALL SPECIES)

Current Management Plan Goals

1. Increase Idaho's breeding Canada goose populations and wintering populations.
2. Increase the annual goose harvest to 50,000 birds.
3. Maintain the average number of geese harvested per hunter per season above 3.0.
4. Increase hunter days to 130,000 annually.

Management Areas

Background and Management Philosophy: Historically, the Pacific Flyway Council has recognized 2 populations of western Canada geese for management purposes (Subcommittee on Rocky Mountain Population Canada Geese 2000). They include the Rocky Mountain Population (RMP) and the Pacific Population (PP). Both populations occur in Idaho. However, during 2013 the Pacific Flyway Study Committee began the review process to update a management plan for western Canada geese that will combine both populations into one management plan. See the 2007 Waterfowl Annual Reports for a thorough history of the goose management areas in Idaho.

For the 2016-2017 season, the USFWS offered a 107-day season for geese statewide. The regular season for dark geese was 105 days with no split, and the two-day youth waterfowl season was held September 24-225, statewide. The duck and dark goose seasons have opened concurrently since the 2003-2004 waterfowl season. However, beginning in 2015, an early Canada goose hunt

has been held in the Southeast Region - in Bear Lake and Caribou counties - from September 1-15 to address agricultural depredation concerns.

During the 2008-2009 regulations cycle, the Pacific Flyway Council extended the white goose framework for Interior states to March 10. During 2016-2017, Idaho implemented a split light goose season in Area 3, which includes portions of the Magic Valley, Southeast, and Upper Snake regions in the American Falls Reservoir area. The season dates were from October 29, 2016 to January 13, 2017 and February 11 to March 10, 2017 to allow for hunting in late February and early March. In Area 2, in the southwest part of Idaho, there was a 105-day light goose season from November 26, 2016 to March 10, 2017. When all other waterfowl and migratory game bird hunting seasons, except falconry, are closed, recorded or electrically amplified bird calls or imitations of bird calls, and unplugged shotguns capable of holding more than 3 shells may be used to hunt light geese. The remainder of the state had light goose seasons concurrent with duck and Canada goose seasons.

During the 2013-2014 season, seasons for white-fronted and Canada geese were separated to allow a 107-day white-fronted goose season that extends beyond the last Sunday in January. In Area 2, in the southwest part of the state, seasons for white-fronted geese and light geese – snow and Ross’s geese – were open at different times for part of the season, with the white-fronted goose season open from November 7, 2016 through February 19, 2017. The remainder of the state had white-fronted goose seasons concurrent with duck and Canada goose seasons.

The description, season framework, and bag and possession limits for each Management Area are found in Appendix A.

Population Surveys

During 2010, 2 helicopter crashes occurred with Department personnel on board. In one instance, the pilot and both passengers sustained serious injuries, and in the other the pilot and both passengers were fatally injured. As a result, the Department conducted a flight safety review during which needs/risk assessment were completed. Aerial Midwinter Waterfowl surveys were discontinued in 2011. In 2015, the USFWS Division of Migratory Bird Management reduced financial support for the Midwinter Waterfowl Survey, nationwide. Since then, only surveys that inform annual harvest management decisions have been conducted. Therefore, all Midwinter Waterfowl surveys have been discontinued in Idaho.

Harvest Characteristics

Telephone Survey: In an effort to reduce costs and increase efficiency, the Department discontinued annual telephone harvest surveys for waterfowl in 2010. The USFWS annually estimates statewide harvest through the Federal Migratory Game Bird Harvest Information Program Harvest.

The Department used a mail-in/telephone survey to estimate light and white-fronted goose harvest from spring seasons in 2014 and 2015. Harvest surveys were not conducted for the 2017 spring seasons.

Federal Migratory Game Bird Harvest Information Program: The goal of the program is to obtain improved harvest estimates for all species. By federal mandate, states provide the USFWS with names and addresses of all migratory game bird hunters, from which the USFWS draws samples of hunters to survey. The Department has complied fully with the USFWS request for information every year since the 1997-1998 season. The USFWS estimated 71,881 geese were harvested in Idaho during the 2016-2017 hunting season, which was up 63% from 2015-2016 estimates (Table 1). According to USFWS Harvest Information Program estimates, the number of active adult goose hunters in Idaho was 11,200 (Table 1). Unfortunately, the company that provided the USFWS with Idaho hunter information for the 2015-2016 season did not do so in a timely fashion. Consequently, the estimated increases in both number of hunters and associated harvest estimates are abnormally large.

Management Implications

Idaho hunter information was not transferred to the USFWS in a timely fashion for the 2015-2016 seasons; therefore, harvest information metrics for this reporting period appear to have increased dramatically from the previous year. The Department met its 1991-1995 WMP goal for total harvest and harvest per hunter per season. Estimated harvest of Canada geese in Idaho is higher than all other states in the Pacific Flyway.

The Department will continue to implement the HIP program (discussed previously in the duck section) to improve wetland habitat for geese and other wetland birds. Goose depredation problems are becoming significant in some urban areas and will require new strategies to manage these birds.

SANDHILL CRANE

The Department's goals and objectives for the sandhill crane are the same as those for the Pacific Flyway (Subcommittee on Rocky Mountain Population Greater Sandhill Cranes 2016), which is available at the Pacific Flyway website at: www.pacificflyway.org.

The RMP sandhill crane population continued to receive increased management emphasis during the reporting period in the Magic Valley, Southeast, and Upper Snake regions because of continued landowner concerns over crop damage. Surveys of RMP greater sandhill cranes in these 3 regions were initiated in 1995 to document total sandhill crane numbers, arrival dates, distribution, and age ratios.

TRUMPETER SWAN

The Department's goals and objectives for the trumpeter swans are the same as those for the Pacific Flyway (Subcommittee on Rocky Mountain Population Trumpeter Swans 2017), which is available at the Pacific Flyway website at: www.pacificflyway.org.

TUNDRA SWAN

The Department's 1991-1995 WMP goals for tundra swan are to: (1) maintain current migrations through Idaho, and (2) meet the demand for non-consumptive use. However, during the reporting period, this species received little management emphasis in Idaho. This is because the tundra swan is not currently hunted in the state, and the species benefits indirectly from other wildlife management programs.

AMERICAN COOT

The Department's 1991-1995 WMP goals for American coot are to: (1) maintain Idaho's population, (2) increase the harvest, and (3) provide maximum recreational opportunity. However, this species received little management emphasis during the reporting period. This is because the American coot is not a popular game bird in Idaho and because it benefits indirectly from other wildlife management programs.

WILSON'S SNIPE

The Department's 1991-1995 WMP goals for Wilson's snipe are to: (1) maintain Idaho's Wilson's snipe population and (2) maintain the harvest. However, during the reporting period, this species received little management attention. This is because the Wilson's snipe is not a popular game bird in Idaho and because it benefits indirectly from other wildlife management programs.

MOURNING DOVE

Current Management Plan Goals

Mourning doves (*Zenaida macroura*) continue to be a popular early-season species for hunting.

Management Areas

Season Framework

The 2016 season framework for doves in Idaho included a season length of not more than 60 consecutive days between September 1 and January 15. The daily bag limit was 15 mourning and white-winged doves in the aggregate. The possession limit was 3 times the daily bag limit, statewide.

Population Surveys

In 2013, the USFWS approved a new harvest strategy that uses the Lincoln estimator (Lincoln 1930, Otis 2006) as the primary monitoring method for mourning dove abundance (USFWS 2015). As a result, mourning dove coo-count surveys were discontinued. However, with a Lincoln estimator, when abundance falls below the closure threshold set in the harvest strategy and a hunting season closure is implemented, no data to monitor abundance is available. Thus, determining when a hunting season could be re-opened is problematic, since the monitoring data to estimate abundance are not available. Consequently, the development and evaluation of an

additional robust estimator for use during a closed season is required to determine when abundance exceeds the closure threshold.

From 2015-2017, Department personnel participated in the *Modified Call-count Survey with Distance Sampling: A Pilot Study to Estimate the Abundance of Mourning Doves in the United States*. Modified call-count surveys were conducted in the Clearwater, Southwest, Magic Valley, and Upper Snake regions.

Harvest Characteristics

Harvest information on mourning doves is collected via the USFWS harvest survey. During the 2016 season, an estimated 108,900 doves were harvested in Idaho.

Management Implications

In 1987, the federal season framework reduced the maximum allowable season length to 30 days and maximum daily bag limit to 10. When the USFWS approved a new harvest strategy in 2014, season frameworks were increased to 60 days and a maximum daily bag limit of 15 mourning and white-winged doves in the aggregate. Possession limits were increased to 3 times the daily bag limit. Hunting season regulations in Idaho have since reflected these changes.

AMERICAN CROW

Season Framework

Unchanged from 2006 (Appendix A).

Harvest Characteristics

Insufficient data is collected from the telephone survey to allow an estimate of American crow (*Corvus brachyrhynchos*) harvest.

Management Implications

Crows will continue to be a species with no active management in Idaho.

STATEWIDE REPORT SURVEYS AND INVENTORY

JOB TITLE: Migratory Bird Spring Surveys and Summer Banding

STUDY NAME: Migratory Bird Population Status, Trends, Use, and Associated Habitat Studies

PERIOD COVERED: April 1, 2017 to September 30, 2017

WATERFOWL PRODUCTION AND SUMMER BANDING

ABSTRACT

In 2017, 2,496 mallards were banded in Idaho. Since 2009, over 14,000 mallards have been banded by Department personnel in Idaho. In 2017, active nests of Pacific Population (PP) Canada geese were counted on the Boundary Smith Creek and Coeur d'Alene River WMAs; 51 nests were located. Aerial Canada goose breeding pair surveys were discontinued in 2011. The Pacific Flyway Study Committee is currently revising the management plan for the Rocky Mountain and Pacific populations of Canada geese. As part of this process, new survey methodologies are being considered.

The combination fixed-wing and ground count of sandhill crane in September was completed in 2017. A total of 4,066 cranes were counted in Idaho. In 2017, 465 sandhill crane tags were available on a first-come first-served basis. The hunts were held in September in 5 areas and an estimated 198 cranes were harvested.

Tundra swans, American coots, and Wilson's snipe received little management emphasis; these species benefit from statewide programs aimed at other species. Department management area descriptions: duck, goose, and sandhill crane hunting season structures, and bag and possession limits for the previous season are provided in Appendix A.

STUDY OBJECTIVES

1. Determine production and trends of resident waterfowl.
2. Determine movements, distribution, and survival rates of resident waterfowl.

PROCEDURES

1. Conduct Canada goose breeding pair aerial surveys and nest searches for specific survey areas and implement a triggering mechanism for determining when to reduce the goose harvest.
2. Band locally-produced waterfowl and monitor movements and survival rates.
3. Trap Canada goose goslings and transplant them into areas where new flocks may be started or to supplement existing low populations.

REGIONAL REPORTS

DUCKS (All Species)

Panhandle Region

Population Surveys: Approximately 250 wood duck nest boxes located in the Panhandle were available for nesting in 2017. A total of 175 boxes were evaluated. Cavity-nesting ducks (wood ducks, common goldeneye, bufflehead, and hooded mergansers) utilized 120 (69%) of the boxes evaluated and all species had a 71% nest success. Wood ducks comprised 51% of the nest box use and had 69% nest success. Hooded Mergansers used 21% of the boxes and had 57% nest success.

Breeding pair surveys were only conducted on Boundary-Smith Creek WMA in 2017. One breeding pair survey was conducted in May counting a total of 111 breeding duck pairs. The most predominant breeding duck species in the Panhandle are mallards, wood ducks, and to a lesser extent, redhead and ring-necked ducks.

Trapping and Transplanting: A total of 2,025 ducks were trapped and banded by Department personnel in the Panhandle Region during August and September 2017 (Tables 2 and 3). Mallards comprised 88% of the sample. Increased effort to band cinnamon teal resulted in 71 teal banded at CDAWMA. Banding occurred at the Coeur d'Alene River, McArthur Lake, Boundary-Smith Creek WMAs, and Kootenai National Wildlife Refuge. No transplanting projects were conducted.

Management Studies: Since 1991, a total of 25,471 locally-produced ducks have been banded during breeding season at the Boundary-Smith Creek, McArthur Lake, Pend Oreille, and Coeur d'Alene River WMAs.

Waterfowl check stations were operated at the Boundary-Smith Creek, Pend Oreille, and Coeur d'Alene River WMAs on the opening Saturday and Sunday of the 2016 duck season. A total of 130 hunters expended 543 hours of effort to harvest 214 ducks (1.6 ducks/hunter; 0.4 hours/duck). American widgeon and mallards comprised 22% and 21% of the harvest, respectively.

Management Implications: The installation of nest boxes in appropriate wetland habitat throughout the Panhandle Region has significantly increased production of cavity-nesting ducks, as seen in the significant percentage of wood ducks in the opening weekend waterfowl check station survey. Although wood ducks are the target species for this effort; common goldeneye and hooded mergansers also frequently use these boxes. Through the Habitat Improvement Program (HIP), many of these nest boxes are now placed on private lands and contribute to the overall improvement in duck production throughout the region.

Clearwater Region

Population Surveys: The Mid-Winter Waterfowl Survey was not conducted in 2016.

A small breeding population of wood ducks nests in the Clearwater Region. From 1988-1998, in an attempt to enhance their presence, nest boxes were erected in conjunction with the Department's HIP program. A landowner survey of wood duck use of nest boxes was discontinued in 2005 due to poor return rates on data cards. Many of these structures are no longer usable. Since 2001, the U.S. Army Corps of Engineers has installed over 30 wood duck nest boxes along the lower Snake and Clearwater River levee ponds and sloughs. A resident population resides in the valley and disperses out from this source.

Trapping and Transplanting: No ducks were banded in the Clearwater Region during this reporting period.

Management Implications: The development of ponds and shallow water areas through the HIP program has improved local duck nesting in the region, though no production surveys are conducted to monitor this.

Southwest (Nampa) Region

Population Surveys: No surveys to estimate duck nesting success and production were conducted on WMAs during the reporting period.

Trapping and Transplanting: A total of 563 ducks were trapped and banded by Department personnel in the Southwest Region during August and September 2017 (Tables 2 and 3).

Disease Testing: Department staff cooperated with USDA-Wildlife Services to collect avian influenza samples from 120 hunter-harvested ducks during the 2016-2017 season. Fifteen samples were also collected from live birds during banding activities in August and September 2017.

Habitat Conditions: No regional wetland surveys are conducted; therefore, the exact extent of wetlands is unknown. The waterfowl production from these wetlands is also unknown.

Management Implications: No new wetlands have been created during this reporting period.

Prescribed fire and herbicide are being used on WMAs to open up dense stands of vegetation. Opening these stands will make them more attractive and productive to waterfowl broods.

Waterfowl die-offs: Approximately 7,200 duck and goose carcasses were collected along the lower Boise River in February and March 2017. Tests of sample carcasses showed avian cholera as the primary cause of the die-off.

Southwest (McCall) Region

Population Surveys: No population surveys are conducted for ducks in the McCall sub-region. Ducks are numerous and mostly associated with the Lake Cascade ecosystem.

Various local groups, such as the Boy Scouts and Reservoir Association, erect wood duck nest boxes. No effort was made to monitor the number of boxes installed by these private organizations. Maintenance of these boxes is encouraged annually.

Trapping and Transplanting: No ducks were banded by the Southwest (McCall) Region during this reporting period.

Management Implications: The HIP program and other programs will be utilized to enhance duck nest production. Priority will be placed on projects that stabilize water levels and enhance nest production on Cascade Reservoir.

Magic Valley Region

Population Surveys: Magic Valley regional staff conducts an annual ground-based waterfowl survey at Hagerman WMA. In January 2017, 12,093 ducks were counted. This is a 35% decrease from 2016. Seven species of dabbling ducks and 7 species of diver ducks were observed. Mallards were again the most abundant species (70%), and ring-necked ducks were second most abundant at 23%.

Habitat Conditions: Precipitation during the 2016-2017 winter was at or near record high levels in all major watersheds in the Magic Valley Region. Snake River flows were generally above normal during the nesting season.

Trapping and Transplanting: No ducks were banded in the Magic Valley Region during this reporting period (Tables 2 and 3).

Depredations: Early and persistent winter precipitation in 2016-2017 delayed corn harvest throughout the region. One depredation complaint was received in February 2017. Several thousand ducks were eating corn in an unharvested field. Propane cannons, cracker shells, and fuse rope were distributed to the owner.

Management Implications: Hagerman, Niagara, Billingsley Creek, Centennial Marsh, and Carey Lake WMAs annually produce ducks; however, much of the region's duck production occurs at Minidoka NWR and other inundated reaches of the Snake River.

Southeast Region

Population Surveys: Duck nest success and brood surveys had been conducted on the Sterling WMA periodically from the mid-1990s to 2016. In 2016, 44 breeding pairs and approximately 4 broods were detected on the WMA with an estimated nest success rate of 9.0%. However, sample sizes over the last several years have been insufficient and this survey was discontinued in 2017. Water levels at American Falls Reservoir and all ponds on Sterling WMA were above average during the nesting and brood-rearing season.

Predator Management: Graduate student research from 1993-1995 indicated high magpie populations on the Sterling WMA in association with dense Russian olive stands. Russian olive stands were removed in the late 1990s in an attempt to reduce predation and increase waterfowl

nest success. Subsequent field observations suggested mammalian predators began to replace magpies following tree removal. Mammalian predator removal efforts were initiated in 1997 and continued through 2009, but have not been carried out since. In 2016, nest searches and nest cameras were used to identify primary nest predators at Sterling WMA. All but one unsuccessful nest was characterized by all eggs disappearing, with no egg shell fragments present; cameras indicated that these were likely magpie depredations. One nest that had egg shell fragments present was depredated by a skunk.

Trapping and Transplanting: Ten ducks were banded in the Southeast Region during this reporting period (Tables 2 and 3).

Waterfowl die-offs: One large die-off occurred on American Falls Reservoir during the 2009 reporting period where over 20,000 waterfowl and water birds died due to an avian botulism outbreak. Another, much smaller (~ 250 waterfowl), botulism outbreak occurred in the Shelly City Sewer lagoon during the 2009 reporting period. In August 2010, there was one small botulism outbreak where approximately 20 ducks died occurred at an industrial settling pond. Climatic conditions during this reporting period, however, were more favorable and no botulism or other waterfowl die-offs were detected.

Upper Snake Region

Population Surveys: No waterfowl brood counts were conducted during this reporting period.

Habitat Conditions: Most ducks in the region are produced on Market Lake and Mud Lake WMAs and Camas National Wildlife Refuge (NWR). Duck production on all of these areas is influenced by water levels. Abnormally wet or dry years can reduce production. Numerous other areas of duck habitat, ranging from small beaver ponds and potholes to riparian communities along the Snake River occur throughout the region. Some areas are severely impacted by livestock grazing while other areas are impacted by irrigation withdrawal, invasive noxious weeds, or housing development. The region is working with private landowners, local weed control areas, the Bureau of Land Management (BLM), U.S. Forest Service, Natural Resource Conservation Service, and other non-government groups to improve the quality of nesting and brood-rearing habitat through HIP.

The best wood duck habitat in the region is on the North Fork Snake River below St. Anthony, the South Fork Snake River below Burns Creek, and the Snake River above Roberts. These areas have excellent cottonwood riparian communities and numerous slow-flowing and backwater sloughs. Except for Cartier Slough WMA, Deer Parks WMA, and the Warm Slough Access Area, the land ownership is a mix of private and BLM lands. Market Lake, Mud Lake, and Sand Creek WMAs have limited wood duck nesting habitat around the edges of marshes and ponds.

Habitat Improvements: On WMA's throughout the region, crops of corn, barley, and spring wheat are planted to benefit migratory and upland birds. On Market Lake WMA, 60 acres were planted and left standing for waterfowl and upland game use. On Mud Lake WMA, 300 acres were planted to food plots to benefit waterfowl and upland game in 2017. On Chester Wetlands and Sand Creek WMAs, 25 acres of food plots were planted to improve habitat for waterfowl in

2017. On Deer Parks Wildlife Mitigation Unit (WMU), 110 acres were planted and left standing for waterfowl in 2017.

Trapping and Transplanting: No ducks were trapped for transplanting in the Upper Snake Region during this reporting period. Habitat biologists banded 276 ducks during this reporting period (Tables 2 and 3).

Waterfowl Die-offs: No waterfowl die-offs occurred during this reporting period.

Depredation: No depredation complaints were received during this reporting period. However, the City of Idaho Falls has contracted with Wildlife Services to control ducks at the Idaho Falls Zoo starting in 2016.

Predator Control: Hunters and trappers remove some predators during normal furbearer seasons.

Management Implications: Management direction in the 1991-1995 WMP is to maintain at least 30% duck nesting success on important duck-producing WMAs and increase duck production by improving nesting habitat on WMAs and through HIP. Production surveys are to be used on WMAs where duck production is a priority to monitor production and measures taken to increase production where it is low.

Nest success has not been monitored since the early 1990s. Mayfield nest success estimates at Market Lake WMA were around 20% each year surveys were conducted. This is below the objective of 30% for the WMA. Nest predation appeared to be caused by both avian and mammalian predators. Mammalian predation appeared higher on nests in large *Juncus* habitat blocks while avian predation appeared higher in fragmented cattail and hardstem bulrush habitat patches.

Results from nest searches and nest success estimates on Market Lake suggest ducks do not use some plant communities for nesting. Very few nests were found in *Juncus* meadows. Reseeding at least some of these communities to cover providing more structure (e.g., a rank bunchgrass) should be considered, and thereafter monitored for nest attempts and success.

Duck nest surveys conducted on Mud Lake WMA generally indicated above 30% nesting success.

The region has some excellent wood duck habitat along the Snake River but has lacked nesting boxes. Adopt-A-Wetland groups and habitat biologists have placed some nesting boxes along the Snake River. Incidental observations suggest a wood duck nesting population has established along the Snake River. Eight new wood duck boxes were installed on Gem State WHA in the early 2000's.

Salmon Region

Population Surveys: No population surveys are conducted for ducks in the Salmon Region.

Trapping and Transplanting: No ducks were banded in the Salmon Region during this reporting period.

Wood duck nest boxes in the region were not visited and cleaned.

GEESE (All Species)

Panhandle Region

Population Surveys: Canada goose nest surveys were conducted on the Coeur d'Alene River and Boundary-Smith Creek WMAs in 2017. A total of 51 nests were located. Forty nest platforms were checked and 32 platforms had active nests - a use rate of 80%.

During August 2017, approximately 20 Canada Geese died in the greater Coeur d'Alene area. Dead geese were located in residential areas with man-made lakes and golf courses. Geese appeared lethargic and in poor body condition prior to death. Two samples were submitted to the USGS NWHL in Madison, WI for necropsies. Both geese were emaciated and had impacted feed in their esophagus's composed of grass and seed. Additionally, both geese tested positive for Zinc Phosphine, which is a widely used in rodenticide. It is unknown if the intoxication was deliberate or accidental, but educational information with results was distributed to the areas experiencing the die-offs.

Trapping and Transplanting: No Canada geese were banded or transplanted in the Panhandle Region during the reporting period.

Management Implications: Canada goose nesting initially increased in the Panhandle Region in response to the placement of man-made nest structures and a gosling transplant program. Production declined in the early 2000's, presumably in response to a lack of platform maintenance. An increased emphasis was placed on maintaining existing nest structures beginning in 2005, and the number of nesting geese initially increased. The number of nesting geese appears to be stable to increasing. Maintenance of nest platforms is no longer a management priority.

HIP has significantly increased the number of nest structures erected on private property since 1988. There are more structures on private land than there are on Department property; however these are not surveyed at this time.

Clearwater Region

Population Surveys: An established flock of PP Canada geese nest in the Clearwater Region. These birds nest along roughly the lower 22 miles of the Clearwater River, primarily from Lewiston upstream to Peck. The 2014 breeding pair survey of this area resulted in a count of 51 indicated pairs and a total of 97 Canada geese. The Canada goose breeding pair survey was not conducted in 2017.

Numbers of active nests in this area were counted consistently from 1981 through 2006. Nesting success had been enhanced in this area with man-made nest structures placed on islands in the

1980s and early 1990s. Consistent data collection of goose nest structure use in the Clearwater Region began in 1988. The number of structures peaked at 80 in the early 1990s. Issues related to a burgeoning population in the late 1990s resulted in a change in management direction. The total number of structures slowly declined as those found unserviceable were removed. The last structures were removed after the 2006 nesting season. Management direction will encourage natural ground nesting on the islands

Additional areas were surveyed for Canada goose nests beginning in 1992. These included farm ponds in the region where nesting structures were issued to landowners, and Mann Lake, Middle Fork Clearwater River, Palouse River, Potlatch River, and Red River. These surveys have been discontinued, as they applied to nest structure use only. Poor return rates on data cards were another factor in discontinuing this survey. Few of these structures remain intact for use by geese.

The ground-based, Midwinter Waterfowl Survey was discontinued in 2016.

Depredation: The number of goose complaints remained low over the reporting period. Increased hunting pressure and harvest, in and around past depredation complaint areas has effectively reduced calls concerning crop damage. Three complaints of crop damage were taken involving Canada geese. The lack of complaints reported around the Mann Lake area likely are a result of the Department's reduction in the size of the waterfowl hunting closure in 2001.

Trapping and Transplanting: No Canada geese were trapped or transplanted in the Clearwater Region during the reporting period.

Management Studies: Problems associated with large numbers of geese at local parks, golf courses, and the Lewiston airport have subsided somewhat due to favorable habitat conditions and dispersal of birds. No trapping operations were conducted this year.

To address concerns about Canada geese in the urban environment of the Lewiston-Clarkston valley, interested parties continue to work together to apply management options available to control local goose numbers. Deterrent measures such as hazing and vegetation manipulation have been conducted by private businesses, state, and federal agencies in the area.

In 2004, the U.S. Army Corps of Engineers (USACE) applied for a permit from the USFWS to addle Canada goose eggs in specified areas on the Washington levee system and associated parks, and on one island shared by both Washington and Idaho. These sites were determined to have heavy nesting concentrations within city limits. Much of the local goose problem is tied to these areas. The USACE now annually treats between 30 to 60 nests in specified areas. The program is reportedly reducing the level of complaints and human health issues related to the local goose population.

Management Implications: Beginning in 2007, the region changed the method of monitoring Canada geese on the lower Clearwater River (Survey Area 5) from structure and ground nest searches to a pair and total goose count. Survey Area 6 was dropped as it tracked only the use of

nest structures issued to landowners throughout the region. These structures are no longer being maintained for goose nesting and most have been removed. The adjusted management objectives for Survey Area 5 are a minimum of 40 breeding pairs and minimum of 100 total geese. Canada goose nesting surveys have been put on hold as the Pacific Flyway Study Committee revises the management plan for the Rocky Mountain and Pacific populations of Canada geese. As part of this process, new survey methodologies are being considered.

Southwest (Nampa) Region

Population Surveys: The breeding pair flight survey for geese was discontinued in 2011 due to safety concerns.

Climatic Conditions: Precipitation in the Southwest Region was well above average during winter in the Weiser, Bruneau, Boise, Payette, and Owyhee basins. Precipitation during spring and early summer was average in the Weiser, Bruneau, Boise, Payette, and Owyhee basins. Because no regional wetland surveys are conducted, the exact extent of wetlands is unknown. The waterfowl production from these wetlands is also unknown.

Trapping and Transplanting: No local geese (goslings or adults) were moved out of the urban area of Boise during this reporting period.

Disease Testing: No disease testing was conducted for geese during the planning period.

Management Implications: Breeding pair counts along the Snake and Payette rivers were below management objectives for 6 consecutive years (prior to 2011). This survey was curtailed in 2011 due to safety concerns. Canada goose surveys on the Deer Flat National Wildlife Refuge also detected a marked decline in production coinciding with spring pair counts (decrease of 45% from 10 year average).

During June 2011, Southwest Region personnel partnered with Boise Parks and Recreation to mark Canada geese with color-coded bands. The ratio of marked to unmarked geese were monitored throughout the year. Observations of geese in Boise parks, indicate only 2% of all birds observed in winter are marked. Whereas, 50% of all birds observed during spring/summer are marked. Because nuisance goose complaints occur during winter, managing “non-resident” nuisance geese during this period is challenging and likely unproductive. Juvenile geese banded in Meridian and Boise were reported as harvested in at least 7 states and 2 Canadian provinces.

Southwest (McCall) Region

Population Surveys: No population surveys were conducted for geese in the McCall subregion during the reporting period

Nesting survey and nest structure use data were not collected during the reporting period. Distribution of existing goose nest structures is coordinated region-wide through HIP.

Trapping and Transplanting: No Canada geese were trapped or transplanted in the Southwest (McCall) Region during the reporting period.

Management Implications: The 1991-1995 WMP directs the Department to reduce the harvest when the three-year average falls below minimum objectives. The minimum objective for Lake Cascade is 225 geese observed and 100 indicated pairs. The 3-year average for indicated pairs was approximately at this objective. These monitoring criteria were developed for the plan without baseline data. Management objectives for these areas should be refined, using available data. These refined objectives should be incorporated into any updates to the 1991-1995 WMP.

Canada goose nesting surveys have been put on hold as the Pacific Flyway Study Committee revises the management plan for the Rocky Mountain and Pacific populations of Canada geese. As part of this process, new survey methodologies are being considered.

Magic Valley Region

Population Surveys: Canada goose breeding pair surveys and Midwinter Waterfowl surveys were discontinued in 2011 per statewide direction. Magic Valley regional staff conduct an annual ground-based waterfowl survey at Hagerman WMA. During January 2017, 2,620 Canada geese were counted, a 63% increase from 2016.

Habitat Conditions: Precipitation during the 2016-2017 winter was at or near record high levels in all major watersheds in the Magic Valley Region. Snake River flows were generally above normal during the nesting season.

Depredation: One goose depredation complaint was received in 2017 in the Hagerman Valley. Chronic goose depredation complaints and public desire for more hunting opportunity in the Hagerman area led to a reduction in the size of the boundary of the Hagerman goose closure in 2015–2016. Although the change in the boundary has only been in effect for one season, the number of depredation complaints has decreased.

Trapping and Transplanting: No Canada geese were trapped or transplanted in the Magic Valley Region during the reporting period.

Management Implications: Prior to 2011 when breeding pair surveys were discontinued, none of the survey areas in the region met the minimum breeding pair or total geese criterion. Increased bag limits (from 2/day to 4/day), poor nesting conditions, and reduced availability of artificial nesting structures are all factors that may have contributed to decline in observed spring goose numbers. With the exception of nesting structures on WMAs, many of the nesting structures in the Magic Valley were constructed in the late 1970s and are no longer functional or are located in areas that are no longer suitable.

Southeast Region

Population Surveys: Canada goose breeding pair surveys and Midwinter Waterfowl surveys were discontinued in 2011 per statewide direction.

Depredation: A total of 5 complaints were filed with the Department during this reporting period; however, Wildlife Services personnel normally deal with waterfowl depredations. An early

season goose hunt is held on an annual basis in Bear Lake and Caribou counties to help alleviate these depredations.

Trapping and Transplanting: No Canada geese were trapped or transplanted in the Southeast Region during this reporting period.

Management Implications: Prior to 2011 when breeding pair surveys were discontinued, goose populations were generally below the 1991-1995 WMP objectives (Connelly and Wackenhut 1990).

Waterfowl die-offs: No die-offs were detected during this reporting period.

Upper Snake Region

Population Surveys: Two surveys (counts of indicated pairs and total geese) were conducted annually on RMP Canada geese to estimate breeding population trends through 2011. These flights were discontinued in 2011 for employee safety reasons.

Habitat Conditions: Most goose nesting on Department WMAs occurs on nesting structures. Nesting on the South Fork Snake River occurs on islands, while nesting at Camas NWR, in the Teton Basin, the North Fork Snake River, and Island Park Reservoir occurs primarily on the ground.

Habitat on the South Fork Snake River and lower Henrys Fork Snake River is being impacted by the invasion of noxious weeds. The Department is a cooperating partner with local weed control districts to address this problem.

Habitat in the Teton Basin is being lost to summer home development. The Department's HIP program has the potential to reduce this loss if landowner cooperation can be obtained.

Goose production along the South Fork is dependent upon water releases from Palisades Reservoir. The U.S. Bureau of Reclamation and the Department jointly researched river flows for optimal goose production during the early to mid-1970s. This study indicated flows between 8,000 and 16,000 cfs during nesting season were optimal for goose production. However, releases are scheduled to meet irrigation water rights and fisheries needs, which reduces goose production due to nest flooding most years.

Depredation: Landowners around the Mud Lake WMA, and north of Idaho Falls on the Snake River have observed increased numbers of geese during this reporting period and requested assistance from the Department and the USFWS. Wildlife Services has contracted with the City of Idaho Falls to control goose numbers along the greenbelt and the Idaho Falls Zoo. Several landowners throughout the Upper Snake Region were provided snow fencing and zone guns to prevent goose depredations. Three goose depredations were investigated for this reporting period.

Predator Control Hunters and trappers remove some predators during normal furbearer seasons.

Trapping and Transplanting: No geese were trapped or transplanted during this reporting period.

Waterfowl Die-offs: No die-offs were detected during this reporting period.

Habitat Improvements: There were no monitoring efforts for success on maintained goose platforms at Deer Parks WMU in 2017.

A variety of crops were planted as food plots in the form of corn, barley, and spring wheat and were left standing for waterfowl and upland game. On Market Lake WMA, 60 acres were farmed during 2017. On Mud Lake WMA, 300 acres were planted to food plots to benefit waterfowl and upland game in 2017. On Chester Wetlands and Sand Creek WMAs, 25 acres of food plots were planted to improve habitat for waterfowl in 2017. On Deer Parks WMU, 110 acres were planted and left standing for waterfowl in 2017.

Management Implications: Canada goose production was increased in the region by erecting additional nest structures on the South Fork Snake River, Island Park Reservoir, and Teton River. Annual maintenance of structures on the South Fork was discontinued years ago and most have fallen into disrepair. There is no plan to rebuild these nest boxes due to increased resident populations and the potential for high depredations. Habitat biologists are also no longer servicing platforms on Island Park Reservoir because of conflicts with reservoir recreationalists.

Geese produced around Gem Lake cause annual depredations on malt barley. Goose nesting platforms were erected around Gem Lake as mitigation for the Idaho Falls hydropower project; however, no brood habitat was included in the mitigation plan. These geese are basically urban geese, which makes population management through harvest difficult.

Salmon Region

The Pacific Flyway Study Committee is currently revising the management plan for the Rocky Mountain and Pacific populations of Canada geese. As part of this process, new survey methodologies are being considered. In light of this, the Department has decided to postpone spring Canada goose surveys until the new methodologies have been designed and the management plan has been completed and approved by the Pacific Flyway Council.

Trapping and Transplanting: No Canada geese were trapped or transplanted in the Salmon Region during this reporting period.

SANDHILL CRANE

The Department's goals and objectives for Rocky Mountain Population (RMP) sandhill cranes are the same as those for the Pacific Flyway (Pacific Flyway Council and Central Flyway Council 2016).

Current Goals

1. Maintain the population between 17,000–21,000 cranes as measured by the recent 3-year average index of total cranes from the September pre-migration survey.
2. Maintain and protect suitable habitats in sufficient quantity and quality to support the population objective and recent past spatial distribution, while encouraging population expansion where desirable.
3. Provide for recreational uses of RMP cranes.
4. Minimize crop depredations by RMP cranes.

The RMP sandhill crane population continued to receive increased management emphasis during the reporting period in the Magic Valley, Southeast, and Upper Snake regions because of continuing landowner concerns over crop damage. Surveys of RMP greater sandhill cranes in these 3 regions were initiated in 1995 to document total sandhill crane numbers, arrival dates, distribution, and age ratios.

Background and Management Philosophy: Rocky Mountain Population greater sandhill cranes have caused crop damage in eastern Idaho for decades. In 1996, the Commission adopted rules that changed the classification of sandhill cranes from migratory nongame birds to migratory game birds and directed the Department to obtain Pacific Flyway Council and USFWS approval for an experimental controlled hunt in 3 areas. See the 2007 Waterfowl Annual Reports for a thorough history of the sandhill crane management areas in Idaho.

In 2009, the Commission authorized sandhill crane seasons that were no longer administered through controlled hunts. Tags are now available on a first-come, first-served basis. This decision was made because the harvest allocation for Idaho had increased in recent years, but the number of birds harvested had remained relatively steady. In 2012, the number of tags was reduced from 680 to 460 due to a decline in the number of cranes observed during the September survey. In 2014, the daily and season limits were decreased to 2 cranes. In 2016, hunts in Bear Lake, Fremont, and Jefferson counties were expanded to include 2 hunt periods – one during September 1-15 and a second from September 16-30. This change was made to increase hunter opportunity as the harvest allocation increased. In 2017, crane hunt areas and periods remained unchanged, but tags were increased to 550. The description, season framework, and bag and possession limits can be found in Appendix A.

Southwest (McCall) Region

Breeding pairs of sandhill cranes occur in the Lake Cascade, North Fork Payette River, and Little Salmon River drainages. No management data are collected on these birds.

Magic Valley Region

In September 2017 crane surveys were conducted in the Silver Creek Valley and Camas Prairie. Thirty-one (31) cranes were observed in the Silver Creek Valley and 3 cranes were observed on the Camas Prairie. Carey Lake was not surveyed in 2017.

Southeast Region

Population Surveys: Personnel for the USFWS and a private contractor collect aerial survey information to determine total sandhill crane abundance during September in selected areas of the Southeast Region (Table 4).

Harvest Characteristics: A mail-in survey with a follow-up telephone survey of non-respondents was used to estimate hunter participation and harvest of sandhill cranes for each hunt (Tables 5 and 6). In 2017, 120 sandhill cranes were harvested in the Bear Lake hunt area and 8 cranes were harvested in the Swan Lake hunt area.

Management Implications: Concerns expressed by grain producers during the mid-1990s prompted the Department to collect baseline information that could be used to identify strategies to reduce crop depredation. Chesterfield Reservoir, Blackfoot Reservoir, Bear River Valley, and Grays Lake were identified as primary sites due to a history of depredation concerns. However, sandhill cranes stage and use grain fields throughout the region including Marsh Valley, Malad Valley, Swan Lake/Oxford Slough area, Bear Lake Valley, American Falls Reservoir, and Thomas Fork Valley.

Depredation: Depredations in the Southeast Region are managed using a lure crop program, most of which have been focused in Caribou County. Department personnel responded to an additional 2 complaints of sandhill cranes outside of the lure crop focus area.

Trapping and Transplanting: A total of 4 adult sandhill crane adults were captured during the reporting period. All were fitted with an aluminum leg band and 2 of those were fitted with a solar-recharging battery-powered GPS tracking device attached to the tarsus. These devices are a GPS-GSM wildlife tracking device by Cellular Tracking Technologies. Three of the cranes (1 transmitter deployed) were captured near Samaria, ID (Oneida County) and the other (1 transmitter deployed) was captured at Twin Springs campground (Oneida County).

Upper Snake Region

Population Surveys: Personnel for the USFWS and a private contractor collect aerial survey information to determine total sandhill crane abundance during September in selected areas of the Upper Snake Region (Table 4).

Harvest Characteristics: A mail-in survey with a follow-up telephone survey of non-respondents was used to estimate hunter participation and harvest of sandhill crane for each hunt (Tables 5 and 6). In 2017, 13, 38, and 19 cranes were harvested from Teton, Fremont, and Jefferson counties, respectively.

Depredation: The region received no sandhill crane depredation complaints during this reporting period.

Trapping and Transplanting:

No sandhill cranes were trapped or transplanted in the Upper Snake Region during this reporting period but trapping efforts were made in Teton Valley during this reporting period.

Management Implications: Fall pre-migration staging area sandhill crane composition surveys were conducted in the Upper Snake Region for the first time in 1995. These baseline data were used to help identify strategies to reduce depredation concerns on pre-migration staging areas in the Fremont and Teton County areas.

Salmon Region

Sandhill cranes occur as scattered breeding pairs in the Lemhi, Pahsimeroi, and Salmon River valleys from Salmon to Stanley. No management data are collected on these birds.

TRUMPETER SWAN

The trumpeter swan is included in the 1991-1995 Nongame Species Plan; the Department's goals and objectives are the same as those of the Pacific Flyway (Pacific Flyway Council 2017). The 1991-1995 WMP contains no goals for this species. Data for trumpeter swans are included in this report for the historical record.

Current Goals

Population

1. Maintain a minimum RMP of 10,000 adults and subadult birds (white birds) using data from the North American Trumpeter Swan Survey.
2. Maintain an RMP U.S. breeding segment of at least 718 adult and subadult birds (white birds) using data from the September (Fall) Survey.
3. Encourage continued growth to restore an interconnected, self-sustaining breeding population that uses diverse habitats across the historic range of the species within the Pacific Flyway. Attain the desired distribution and numbers of white birds and nesting pairs with broods within the next 5 years.
4. Maintain a self-sustaining RMP Canadian breeding segment (as monitored by the North American Trumpeter Swan Survey), well distributed throughout Western and Northern Canada.

Habitat

1. Maintain, and when possible, improve quantity and quality of breeding and wintering habitats to support population objectives throughout the annual cycle.
2. Identify potential restoration areas that will support breeding range expansion, enhance connectivity and growth of breeding flocks, and increase the likelihood swans will use new wintering habitats.

Harvest

1. Ensure trumpeter swan conservation is considered to maintain compatibility with tundra swan hunting in the Pacific Flyway.

Information Needs/Research

1. Seek funds to address priority research and information needs, as well as habitat improvement and range expansion efforts.

Magic Valley Region

In 1994, 1995, and 1996, a pair of trumpeter swans successfully nested at White Arrow Ponds north of Bliss in Gooding County. Since then, trumpeter swans have made no attempt to nest at that site or attempts were brief and unsuccessful.

Successful nesting by trumpeter swans was also documented in 1995 and 1996 at the Department's Highway 46 Pond in Camas County. In 2002, a pair of trumpeter swans successfully nested and reared 3 juveniles on a private pond approximately 6 miles southeast of the Department's Highway 46 Pond.

During August 2006, Department staff found a pair of adult trumpeter swans with 3 cygnets on Spring Creek Reservoir in Camas County. No nesting trumpeters were documented in the region during 2007; however, a pair of adults was observed at Thorn Creek Reservoir by Department personnel on August 23, 2007. Trumpeters with cygnets were observed on the Snake River and at White Arrow Ponds during a February 2009 survey. No evidence of nesting trumpeters has been documented in the region since 2009.

Southeast Region

The Department's goals and objectives are the same as those of the Pacific Flyway (Pacific Flyway Council 2017). The 1991-1995 WMP contains no goals for this species. Data for trumpeter swans are included in this report for the historical record.

Upper Snake Region

The Department's goals and objectives are the same as those of the Pacific Flyway (Pacific Flyway Council 2017). The 1991-1995 WMP contains no goals for this species. Data for trumpeter swans are included in this report for the historical record.

In the Upper Snake Region, trumpeter swans have been a principal catalyst for thousands of acres of habitat protection and wetland restoration on private lands funded by such federal and state programs as the North American Wetland Conservation Act (NAWCA), the Land and Water Conservation Fund and Idaho's Landowner Incentive Program. Some of the most meaningful wetlands conservation/restoration work has occurred in Teton Basin, Idaho.

Motivated by the goals defined in the 2008 Pacific Flyway Management Plan, the strategic location of Teton Basin for Greater Yellowstone swan conservation, and increasing concern about possible extirpation of trumpeter swans in Yellowstone National Park, *The Teton Basin Trumpeter Swan Breeding Habitat Suitability Assessment* was completed by the IDFG, Teton Regional Land Trust and Intermountain Aquatics (IMA). This assessment formally evaluated the suitability of Teton Basin wetlands for supporting nesting trumpeter swans and identifies locations where landowners are willing to participate in future swan translocations. As a result, the Greater Yellowstone Trumpeter Swan Working Group and Pacific Flyway Council voted to add Teton Basin to the list of priority sites approved for translocations of captive-reared swans from the Wyoming Wetland Society facility in Jackson Hole, Wyoming.

Project partners initiated trumpeter swan translocations in Teton Basin in summer 2013 with the following project objective: Establish a minimum of 2 active nest sites in Teton Basin over a 10 year period. Project implementation was led by the IDFG and TRLT and focuses on 1) maintaining location records of released birds, 2) maintaining optimal habitat management at breeding marshes and 3) maintaining viable partner-landowner relationships.

The fourth TRUS release in Teton Basin, consisting of 4 yearling swans was conducted at Lazy K Marsh on May 2, 2017. The 4 yearlings (2 males, 2 females) were marked with neck collars reading R16, R17, R18, R19, in addition to Federal tarsal bands, and were released onto Lazy K marsh without an enclosure.

On May 8, 2017, 7 trumpeter swans were observed on Lazy K Marsh including R13, R14, the 4 yearlings released in 2017, and a wild unmarked yearling swan. On May 14, 2017, 6 swans were observed on Lazy K Marsh including all previously observed swans, except R13. Swan R14 was observed showing dominance behavior, including vocalizations followed by smacking of his head and wings in water. He was also observed chasing and harassing the unmarked yearling swan. On May 17, 2017, 5 swans were observed on Lazy K Marsh including R14 and the 4 2017 released yearlings. This group remained on Lazy K Marsh throughout the summer with a wild unmarked swan visiting on occasion, and R14 leaving temporarily on occasion.

TUNDRA SWAN

The Department's 1991-1995 WMP goals (Connelly and Wackenhut 1990) for the tundra swan are the same as those of the Pacific Flyway. However, during the reporting period, this species received little management emphasis in Idaho. Tundra swans are not currently hunted in Idaho, but benefit indirectly from other wildlife management programs.

Tundra swans migrate through the region in spring and fall, and some winter on the Snake River, the North Fork Snake River and the Teton River, but none are known to nest in the state.

AMERICAN COOT

The Department's 1991-1995 WMP goals for the American coot are to 1) maintain the Idaho population, 2) increase the harvest, and 3) provide maximum recreational opportunity (Connelly and Wackenhut 1990). However, during the reporting period, this species received little management emphasis. This is because the American coot is not a popular game bird in Idaho and because it benefits indirectly from other wildlife management programs.

WILSON'S SNIPE

The Department's 1991-1995 WMP goals for the Wilson's snipe are to 1) maintain Idaho's Wilson's snipe population and 2) maintain the harvest (Connelly and Wackenhut 1990). However, during the reporting period, this species received little management attention. This is because the Wilson's snipe is not a popular game bird in Idaho and because it benefits indirectly from other wildlife management programs.

MOURNING DOVE

Because mourning dove coo-count surveys are no longer conducted, banding doves has become increasingly more important. The mourning dove banding quota for Idaho is 633 doves. Idaho has participated in a Pacific Flyway-wide effort to trap and band mourning doves since 2003. In 2017, 677 doves were banded, (Table 7). Since 2003, 9,805 mourning doves have been banded in Idaho.

Panhandle Region

Population Surveys: Mourning doves are common, in low numbers, in the Panhandle. Most mourning doves are found during summer around agricultural lands near Worley, Plummer, Harrison, Post Falls, and Bonners Ferry.

No dove routes were conducted in 2014 or 2015. The state is evaluating a new survey route technique and no routes were selected in the Panhandle.

Harvest Characteristics: In north Idaho, most mourning doves leave before the season opens. The season opener (1 Sep) coincides with the first cool evening temperatures of late August. Also, for most grain and grass crops, farmers burn their fields after harvest annually. Beginning in mid-August and ending in late September, most cover and food patches are consumed by fire.

Mourning dove hunting effort in Panhandle Region is very low. A few hunters are checked on opening day on Harrison Flats and near Athol on the edge of the Rathdrum Prairie. Harvest information on mourning doves is collected via the USFWS harvest survey. No regional harvest survey has been conducted since 1995.

Management Implications:

Widespread burning of crop residues practiced by area farmers coupled with the first cool evening temperatures of late August usually combine to move mourning doves south out of the region before hunting season opens.

Clearwater Region

Population Surveys: Historically there were 2 mourning dove call-count routes conducted in the Clearwater Region. By themselves, these routes did not provide an accurate index to dove production or population trends. However, when incorporated into the results from all other routes in the state, an index to statewide dove production was achieved. Beginning in 2015, a three-year experimental monitoring protocol was initiated by the USFWS to estimate mourning dove populations across the US that consisted of a single-observer survey that utilized distance sampling during point counts along established Call Count Survey routes to estimate population abundance. One of these routes was located in the Clearwater Region (1150). Since the protocol was different, results are probably not directly comparable with those collected previously. However, 3 doves were heard during this 20-mile/stop survey effort (0.15 doves heard per mile surveyed). An additional 35 doves were seen, representing 6 separate groups/flocks during this survey (but were not heard/calling).

Harvest Characteristics: Harvest information on mourning doves is collected via the USFWS harvest survey. No regional harvest survey has been conducted since 1995.

Trapping and Banding: The Clearwater Region has participated in a statewide effort to trap and band mourning doves since 2003. A delayed start and problems with trap-site selection resulted in no doves trapped in 2003. In 2004, a total of 63 doves were banded at 3 sites. All doves received a standard leg band; hatch-year doves also received a reward band. In 2005, a total of 10 doves were banded at 2 sites. Four individuals were recaptured during the course of the 2005 season (2 adult males and 2 hatch-year birds). Annual capture efforts have continued to yield variable results (range of 7 to 109 doves, 2006-2013). A total of 46 doves were banded in 2013. In 2014, a personnel shortage in the regional wildlife program resulted in a total of just 8 doves being banded in the region. Forty-four doves were trapped/banded in the Clearwater Region in 2015. No doves were banded in 2016 and 2017 in the Clearwater Region however, personnel in the Panhandle Region conducts the annual capture efforts for all of North Idaho.

Management Implications: Dove management in the Clearwater Region consists of offering an annual hunting season as liberal as the federal season framework allows and conducting the annual call-counts on routes located within the region.

Southwest Region

Population Surveys:

During August 2017, regional personnel counted mourning doves while conducting pheasant brood routes. Approximately 3.6 mourning doves were counted per mile in 2017, down 21% compared to 2016. Modified coo-count surveys were also conducted in conjunction with the USFWS.

Harvest Characteristics: Harvest information on mourning doves is collected via the USFWS harvest survey. No regional telephone harvest survey has been conducted since 1995.

Trapping and Banding: The Southwest Region has participated in a statewide effort to trap and band mourning doves since 2003 (Table 7). All doves banded between 2003 and 2007 were banded with US Geological Survey (USGS) toll-free bands. During 2008-2009, the USGS introduced web address bands. Since 2010, all doves have been banded with web-address bands. Fifty-one doves were banded in the Southwest Region in 2017 (Table 7).

Management Implications: Dove hunting in the Southwest Region remains popular with sportsmen. Management consists of providing liberal seasons and bag limits within the Federal framework, improving bird habitat on public and private lands, and securing access to lands on which to hunt.

Magic Valley Region

Population Surveys: Department personnel, in cooperation with USFWS, collected data on one spring call-count route in the Magic Valley Region in 2017.

Doves observed on August roadside surveys have ranged from 1.3 doves/mile in 2000 to 5.1 doves/mile in 2009. Number of doves observed on August routes has trended upward during the past 25 years. From 2000-2012, 4.1 doves/mile were observed and during 1986-1999, 2.4 doves/mile were observed. Roadside surveys were discontinued in 2013.

Trapping and Banding: The Magic Valley Region has participated in a statewide effort to trap and band mourning doves since 2003 (Table 7). In 2017, 159 doves were banded at multiple locations throughout the region; a slight increase from 2016 when 110 birds were banded (Table 7). Since 2003, over 2,400 doves have been banded in the region. Banding will continue during future reporting periods.

Harvest Characteristics: Harvest information on mourning doves is collected via the USFWS harvest survey. A telephone harvest survey of hunters has not been conducted by the Department since 1996.

Management Implications: Roadside survey data collected in the 1980s suggest as many as 50% of the doves in the Magic Valley Region migrated out of the area by the opening of hunting season on September 1. The onset of cooler weather, usually in early September, triggers movement of many of the remaining doves.

Southeast Region

Population Surveys: Wing barrels provide only a limited amount of data on mourning doves. Sample sizes are generally too small for analysis.

In 2017, 195 doves were banded in Menan, Idaho Falls, Rigby, and Mud Lake.

Harvest Characteristics: Harvest information on mourning doves is collected via the USFWS harvest survey. No regional telephone harvest survey has been conducted since 1995.

Trapping and Banding: The Southeast Region has participated in a statewide effort to trap and band mourning doves since 2003 (Table 7). However, from 2007–2012 no banding occurred in the region. During 2003–2006, 475 total doves were banded in the Southeast Region. In 2013, banding efforts were again initiated. During this reporting period, 120 doves were banded in the Southeast Region.

Management Implications: Management decisions rely heavily on population and harvest statistics collected nationwide by USFWS.

Upper Snake Region

Population Characteristics: Department personnel, in cooperation with USFWS, collect data on dove call-count routes and are reported directly to USFWS. No routes were conducted during this reporting period.

Harvest Characteristics: No doves were checked at check stations on opening weekend of the 2017 sage grouse season. Harvest surveys have not been conducted since 1996. Hunters report harvest directly to USFWS.

Trapping and Banding: The Upper Snake Region has participated in a statewide effort to trap and band mourning doves since 2003 (Table 7). In 2017, 195 doves were banded Menan, Idaho Falls, Rigby, and Mud Lake. Over 2,200 doves were banded in the region between 2003 and 2017.

Management Implications: The mourning dove is one of the most common nesting game birds in Upper Snake Region. However, in many years, the majority of birds have left the area prior to the hunting season opener (September 1) or shortly thereafter. Management efforts are aimed at minimizing sportsmen/landowner conflicts, and improving habitat indirectly through HIP (e.g., windbreaks, guzzlers, and CRP plantings). We will continue to take advantage of harvest opportunities as allowed by federal regulations.

Salmon Region

Abstract: Mourning doves breed in moderate numbers in Salmon Region, but are usually only lightly harvested here due to migration timing.

Population Surveys: The Salmon Region contains a breeding population of mourning doves. Prior to the reporting period, the only population information obtained was from call counts in the southern portion of Lemhi Valley. During 1985, 1986, and 1987, a total of 4 mourning doves were seen or heard along the route. Doves heard and seen increased in the 2000s, but declined to only one dove seen in 2010 and 2011. In 1988, the southern half of the route was relocated 3 miles to the east. Beginning in 2000, the western portion (approximately 7 miles) of the route on Highway 28 was relocated to the north and east. The new section follows Lemhi Back Road from Leadore to Little Eightmile Creek. Call count routes in the region were discontinued in 2013.

Trapping and Translocation: As part of a national mourning dove banding project (under auspices of USFWS), staff in the Salmon Region have captured and banded doves since 2003 (Table 7). Capture was conducted at 2 sites, Baker and Kirtley Creek, from 2003-2006. During 2011, Baker was the only capture site; we placed bands on 67 doves and recaptured 11 birds from previous years. Based on recapture rates across subsequent years, minimum survival rates were surprisingly high, particularly for birds captured during 2003 at the Baker site. Minimum survival rates for doves captured in 2003 at Baker were 42% through 2004 and 30% through 2005. Minimum one-year survival for doves captured in 2004 through 2010 at Baker ranged from 6% to 23%. For the reporting period, trap and banding sites have been dispersed across the region to 4 locations. In 2017, 75 doves were banded at 2 of the locations.

Harvest Characteristics: During years in which mourning doves delay their migration slightly, Salmon Region hunters are able to harvest moderate numbers of birds. In most years, harvest is low. Due to small sample sizes, telephone survey harvest data are imprecise at the county level.

Habitat Conditions: Mourning doves are common, but not abundant throughout the region, indicating that perhaps suitable habitat is limited. Most dove use is located in riparian willow habitats associated with cattle ranching operations; these habitats are likely to decrease as housing developments replace working ranches. However, dove numbers may remain stable if appropriate vegetation accompanies housing development.

Management Implications: The extended season (60 days) from 1983 to 1986 had little effect on harvest because many doves move out of the area soon after the September 1 opening date. Similarly, the 30-day season initiated in 1987 due to a general decline in mourning dove numbers in the western United States probably did not affect harvest in our area. Further, the current 60 day season has not affected harvest in our area.

AMERICAN CROW

The American crow continues to be a species with minimal active management.

LITERATURE CITED

- Connelly, J., and P. Wackenhut. 1990. Waterfowl Management Plan, 1991-1995. Unpublished Report, Idaho Department of Fish and Game, Boise, Idaho, USA.
- Subcommittee on Rocky Mountain Canada Geese. 2000. Pacific Flyway management plan for the Rocky Mountain Population of Canada Geese, Pacific Flyway Study Comm. [c/o USFWS] Portland, Oregon, USA. Unpubl. rept.
- Pacific Flyway Council. 2017. Pacific Flyway management plan for the Rocky Mountain Population of Trumpeter Swans. Pacific Flyway Council, care of U.S. Fish and Wildlife Service, Division of Migratory Bird Management, Vancouver, Washington. 50 pp.
- Pacific Flyway Council and Central Flyway Council. 2016. Pacific and Central Flyways Management plan for the Rocky Mountain population of greater sandhill cranes. Pacific Flyway Council and Central Flyway Council, care of the U.S. Fish and Wildlife Service's Pacific Flyway Representative, Vancouver, Washington. 47pp.
- U.S. Fish and Wildlife Service. 2015a. Waterfowl population status, 2015. U.S. Department of the Interior, Washington, D.C. USA.
- U.S. Fish and Wildlife Service. 2015b. Adaptive Harvest Management: 2015 Hunting Season. U.S. Department of Interior, Washington, D.C. USA.

Table 1. Estimated waterfowl harvest numbers from USFWS waterfowl hunter survey for Idaho, 1988-present.

Year	Duck stamps sold	Estimated adult hunters	Total ducks harvested ^a	Total geese harvested ^a
1988	16,597	14,271	112,900	26,600
1989	16,894	14,073	119,600	30,500
1990	17,036	13,443	96,700	36,800
1991	17,151	14,144	117,880	39,500
1992	17,717	14,132	126,700	31,700
1993	21,761	17,972	153,200	45,600
1994	21,229	17,418	141,300	61,100
1995	21,097	18,395	203,400	46,900
1996	22,382	19,751	245,800	61,100
1997	23,697	22,241	248,600	40,700
1998	23,515	21,006	254,700	56,700
1999	26,709	20,795	228,300	28,500
2000	28,206	23,306	173,200	86,200
2001	26,173	12,000/14,900 ^b	138,600	64,400
2002	24,937	14,500 / 9,900 ^b	160,600	36,700
2003	24,878	18,200/15,400 ^b	262,900	84,200
2004	24,320	17,100/13,300 ^b	188,500	62,700
2005	23,724	18,500/16,000 ^b	258,300	74,300
2006	25,726	18,400/14,500 ^b	278,000	77,800
2007	27,137	17,500/11,178 ^b	229,100	40,900
2008	^c	20,000/13,700 ^b	257,600	64,500
2009	^c	15,400/11,100 ^b	286,600	58,300
2010	^c	16,900/11,100 ^b	156,600	31,400
2011	^c	14,200/12,800 ^b	209,500	51,000
2012	^c	16,200/12,700 ^b	277,700	73,900
2013	^c	19,400/15,600	320,400	70,300
2014	^c	18,959/15,165	241,828	73,437
2015	^c	11,849/9,441	173,674	44,096
2016		15,464/11,202	339,849	71,881

^a Adjusted for exaggeration memory bias and juvenile hunter density.

^b The first number is estimated number of duck hunters and the second number is estimated number of goose hunters.

^c Data is no longer available.

Table 2. Ducks banded in Idaho by Department and USFWS personnel, 2017.

Species	Panhandle	Clearwater	Southwest	Magic Valley	Southeast	Upper Snake	Salmon	Total
American Widgeon	1					6		7
American Green-winged Teal	14		4			2		20
Blue-winged Teal	3		2					5
Canvasback						2		2
Cinnamon Teal	83		1			8		92
Gadwall				2	10	52		64
Mallard	1,778		549	9		163		2,496
Northern Pintail	4					1		5
Northern Shoveler						32		32
Redhead	23					9		32
Ring-necked	14							14
Wood Duck	107		4					111
Total	2,030	0	563	192	10	276		3,066

Table 3. Mallards banded in Idaho by Department personnel, 2009-Present.

IDFG Region	2009	2010	2011	2012	2013	2014	2015	2016	2017	Total
Panhandle	1,065	1,086	971	455	1,776	1,053	867	942	1,775	9,990
Clearwater	12	3	0	0	0	0	11	0		26
Southwest	40	63	0	0	0	0	150	413	549	1,215
Magic Valley	0	59	0	0	0	0	0	0	9	68
Southeast	0	0	0	0	0	0	45	26		71
Upper Snake	977	633	788	14	380	565	21	266	163	3,807
Total	2,022	1,844	1,759	469	2,156	1,618	1,094	1,647	2,496	15,177

Table 4. September aerial and ground-based counts of RMP greater sandhill cranes in eastern Idaho, 2011-present.

Region/Area	2011	2012	2013	2014	2015	2016	2017
Magic Valley							
Camas Prairie	32	ND	21	ND	0	0	3
Carey Lake	0	0	0	ND	0	0	ND
Silver Lake	399	281	421	431	575	31	31
Southeast							
American Falls Reservoir	52	103	288	155	71	198	91
Bear River Valley	908	559	410	778	1,272	1,301	681
Blackfoot Reservoir	298	434	333	520	537	600	187
Chesterfield Reservoir	135	40	103	49	196	43	59
Grays Lake	972	262	907	839	489	328	466
Malad River	271	96	248	325	320	582	384
Marsh Valley	135	193	122	238	149	178	179
Oxford Slough	241	136	136	205	214	0	197
Upper Snake							
Ashton-St Anthony	400	950	662	654	840	705	806
Camas NWR	430	60	200	375	426	179	107
Henry's Lake Flats	144	72	59	2	1	0	8
Island Park Reservoir	5	65	0	4	0	0	15
Kilgore	ND	ND	ND	ND	ND	ND	ND
Market Lake WMA	2	6	5	6	25	4	4
Mud Lake WMA	13	103	248	53	54	73	47
Teton Basin	592	572	1,065	1,130	1,285	1,221	801
Total	5,029	3,932	5,228	5,764	6,454	5,443	4,066

Table 5 Sandhill crane tag levels, estimated hunter participation, and harvest based on mail and telephone surveys, 2011-present.

Hunt Areas 1-6	2011	2112	2013	2014	2015	2016	2017
Bear Lake-Caribou County							
Tags available	400	295	180	160	195	300	357
Tags issued	355	279	180	160	195	305	331
Total hunters	201	131	87	83	109	154	168
Days hunted	595	389	207	197	277	387	439
% Success ^a	44	20	51	46	53	53	36
Harvest	141	139	93	74	104	161	119
Teton County							
Tags available	100	40	25	22	25	30	35
Tags issued	52	49	25	21	25	30	35
Total hunters	36	27	18	13	15	19	15
Days hunted	86	44	38	23	23	27	37
% Success ^a	59	59	7	62	56	87	37
Harvest	30	29	2	13	14	26	13
Fremont County							
Tags available	100	65	40	35	45	70	82
Tags issued	91	98	40	35	45	70	82
Total hunters	65	57	34	23	35	48	43
Days hunted	143	124	53	61	98	97	94
% Success ^a	69	55	58	71	64	56	43
Harvest	61	54	23	25	29	39	52
Bonneville County							
Tags available	40	10	5				
Tags issued	9	14	5				
Total hunters	9	3	4				
Days hunted	11	9	7				
% Success ^a	37	50	0				
Harvest	5	7	0				
Jefferson County							
Tags available	40	20	10	10	10	40	47
Tags issued	36	40	11	10	26	40	49
Total hunters	18	17	7	6	13	26	22
Days hunted	55	59	9	1	34	50	55
% Success ^a	69	73	73	80	58	58	39
Harvest	26	29	8	8	9	23	19
Bannock County							
Tags available		30	15	13	15	25	29
Tags issued		30	15	15	15	25	29
Total hunters		19	11	11	11	15	14
Days hunted		46	38	33	15	26	44
% Success ^a		60	60	93	70	40	28
Harvest		18	9	14	10	10	8

State Total							
Tags available	680	460	275	240	290	465	550
Tags issued	543	510	276	241	306	470	526
Total hunters	285	255	161	135	185	263	261
Days hunted	891	671	352	325	447	241	670
% Success ^a	53	60	49	56	54	55	38
Harvest	261	275	135	134	166	258	202

Table 6. Age composition of sandhill crane harvest based on mail and telephone surveys, 2010-present.

Hunt Areas 1-6	2010	2011	2012	2013	2014	2015	2016	2017
Bear Lake-Caribou County								
Juvenile	19	26	21	8	4	15	20	14
Adult	131	115	118	85	70	89	141	115
Unknown								
Teton County								
Juvenile	6	3	5	0	1	0	5	0
Adult	27	27	24	2	12	14	21	13
Unknown								
Fremont County								
Juvenile	9	10	11	1	3	4	6	4
Adult	38	51	43	22	22	25	33	48
Unknown								
Bonneville County ^a								
Juvenile	1	0	4	0				
Adult	8	5	3	0				
Unknown								
Jefferson County								
Juvenile	2	6	4	1	0	2	1	9
Adult	12	19	25	7	8	7	22	10
Unknown								
Bannock County								
Juvenile			2	0	1	0	2	0
Adult			16	9	13	10	8	8
Unknown								

^a Bonneville County hunt was discontinued in 2014.

Table 7. Mourning doves banded in Idaho, 2007-present.

Year	Adult Male	Adult Female	Unknown	Hatch Year	Unknown	Total
2007	242	91	20	309	35	697
2008	274	115	34	216	9	648
2009	191	75	20	252	1	539
2010	174	78	32	169	12	465
2011	163	74	25	93	3	359
2012	236	105	44	292	22	699
2013	213	99	28	184	3	527
2014	333	141	34	291	8	807
2015	331	141	39	266	18	795
2016	258	127	1	269	18	695
2017	269	117	24	247	20	677
Total	2,684	1,163	301	2,588	149	6,908

APPENDIX A

IDAHO

2016-2017 SEASON

WATERFOWL RULES

Idaho Migratory Game Bird

2016-2017 Seasons & Rules



Photo courtesy Conrad Williams

NEW: Includes Seasons and Rules for Crows, Doves, Sandhill Cranes and Waterfowl

idfg.idaho.gov

Idaho Department of Fish & Game
MIGRATORY GAME BIRD SEASONS AND RULES
 September 2016 through March 2017

Seasons	September	October	November	December	January	February	March
Special Youth Hunt Statewide	24th & 25th						
Duck Area 1		1st	22nd	Scaup	13th		
Duck Area 2		15th	5th	Scaup	27th		
Canada Goose Area 1		1st		13th			
Canada Goose Area 2		15th		27th			
Canada Goose Area 3	1st-15th	1st		29th			
White-fronted Goose Area 1		1st		13th			
White-fronted Goose Area 2			7th		19th		
Light Goose Area 1		1st		13th			
Light Goose Area 2				26th		10th	
Light Goose Area 3			29th	13th		11th-10th	

Required:

- Migratory Bird (HIP) Permit.
- Federal Migratory Bird (Duck) Stamp for all hunters 16 or older.
- Nontoxic shot.

It is the responsibility of the hunter to become familiar with the rules that affect the hunt in which he or she is participating. This brochure provides seasons for migratory game bird hunting, and provides a summary of rules that govern migratory game bird hunting in Idaho. For details about the rules, please refer to these links: Idaho Administrative Procedures Act, idfg.idaho.gov/content/idfg-rules; Idaho Code idfg.idaho.gov/content/title36.



License holder must validate stamp by signing across the front in ink.

Remember!

If you are 16 or older, you need to purchase a Federal Migratory Bird (Duck) Stamp.

Available online @

idfg.idaho.gov/content/duckstamp

Statewide Duck (Including Merganser), Wilson's Snipe and American Coot Seasons, Limits & Hunt Area Descriptions

Daily Bag Limit: see below



AREA 1

- October 1, 2016 - January 13, 2017
- Scaup Season:
October 22, 2016 - January 13, 2017

Area 1 includes all parts of the state NOT included in Area 2. (See yellow area on map)

AREA 2

- October 15, 2016 - January 27, 2017
- Scaup Season:
November 5, 2016 - January 27, 2017

Area 2 includes the following counties: Ada, Boise, Canyon, Cassia, Elmore, Gem, Gooding, Jerome, Lincoln, Minidoka, Owyhee, Payette, Twin Falls and Washington counties. (See blue area on map).

Duck Bag Limit (Including mergansers)

Daily Bag Limit 7 of any kind, *except* shall not include more than the following:

- 2 female mallard
- 2 redhead
- 2 pintail
- 2 canvasback
- 3 scaup

Bag Limits for Wilson's Snipe and Coots

Wilson's Snipe

Daily Bag Limit: 8

Coots

Daily Bag Limit: 25

Possession Limit: 3 times daily bag limit

Canada Goose Seasons, Limits & Hunt Area Descriptions

Daily Bag Limit: 4 Possession Limit: 12



AREA 1

- October 1, 2016 - January 13, 2017

Area 1 includes all parts of the state NOT included in Area 2 and 3. (See yellow area on map).

AREA 2

- October 15, 2016 - January 27, 2017

Area 2 includes the following counties: Ada, Boise, Canyon, Cassia, Elmore, Gem, Gooding, Jerome, Lincoln, Minidoka, Owyhee, Payette, Twin Falls and Washington counties. (See blue area on map).

AREA 3

- September 1 - 15, 2016
(Daily bag limit is 5 during this time period only).
- October 1, 2016 - December 29, 2016

Area 3 includes Bear Lake County, Bingham County within the Blackfoot Reservoir drainage, and Caribou County **except that portion within the Fort Hall Indian Reservation**. (See orange area on map).



**STOP AQUATIC
HITCHHIKERS!™**

Prevent the transport of nuisance species.
Clean all recreational equipment.
www.ProtectOurWaters.net

White-fronted Goose Seasons, Limits & Hunt Area Descriptions

Daily Bag Limit: 10 Possession Limit: 30



AREA 1

- October 1, 2016 - January 13, 2017

Area 1 includes all parts of the state NOT included in Area 2. (See yellow area on map).

AREA 2

- November 7, 2016 - February 19, 2017

Area 2 includes the following counties: Ada, Boise, Canyon, Cassia, Elmore, Gem, Gooding, Jerome, Lincoln, Minidoka, Owyhee, Payette, Twin Falls and Washington counties. (See blue area on map).

- Closures:** In the Southwest Region, Fort Boise and Payette River WMAs and that portion of the Roswell Marsh Wildlife Habitat Area south of State Highway 18, and the Snake River Islands Unit of the Deer Flat National Wildlife Refuge will be closed February 1 - March 10, 2016.



**STOP AQUATIC
HITCHHIKERS!™**

Prevent the transport of nuisance species.
Clean all recreational equipment.
www.ProtectYourAbode.net

Light Goose Seasons, Limits & Hunt Area Descriptions (Including: Blue, Ross's and Snow Geese)

Daily Bag Limit: 20 Possession Limit: 60



AREA 1

- **October 1, 2016 - January 13, 2017**

Area 1 includes all parts of the state NOT included in Area 2 and 3. (See yellow area on map).

- **Closures: Fremont and Teton counties**

AREA 2

- **November 26, 2016 - March 10, 2017**

Area 2 includes the following counties: Ada, Boise, Canyon, Cassia, Elmore, Gem, Gooding, Jerome, Lincoln, Minidoka, Owyhee, Payette, Twin Falls, and Washington counties. (See blue area on map).

- **Closures:** In the Southwest Region, Fort Boise and Payette River WMAs and that portion of the Roswell Marsh Wildlife Habitat Area south of State Highway 18, and the Snake River Islands Unit of the Deer Flat National Wildlife Refuge will be closed February 1 - March 10, 2016.

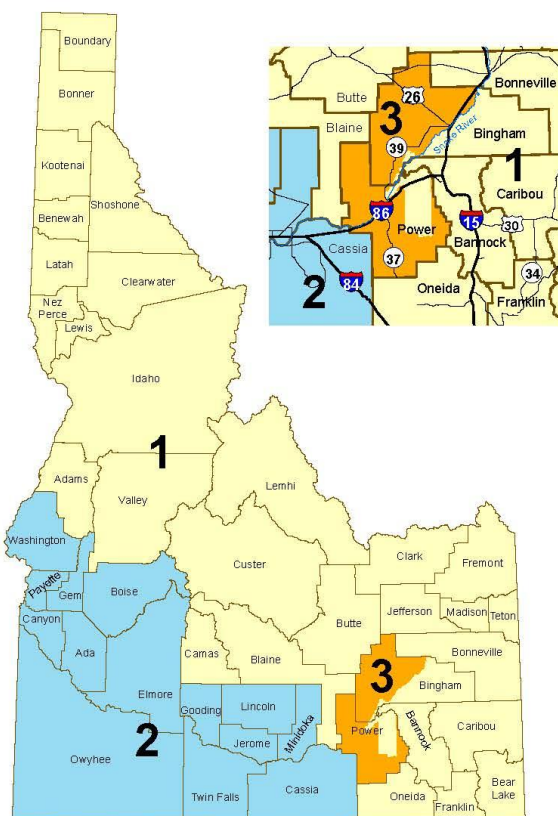
AREA 3

- **October 29, 2016 - January 13, 2017**
- **February 11, 2016 - March 10, 2017**

Area 3 includes Bingham County west of the west bank of the Snake River, east of the McTucker boat ramp access road, and west of the American Falls Reservoir bluff; Power County, except below the American Falls Reservoir bluff and those lands and waters within the Fort Hall Indian Reservation. (See orange area on map).

Legal hunting methods for light geese

When all other waterfowl and migratory game bird hunting seasons, except falconry, are closed, recorded or electrically amplified bird calls or imitations of bird calls, and unplugged shotguns capable of holding more than three shells may be used to hunt light geese. These hunting methods apply to the light goose seasons in Area 2 from February 20 to March 10, 2017, and in Area 3 from February 11 to March 10, 2017.



Mourning Dove Seasons and Limits

Daily Bag Limit: 15 Possession Limit: 45

- September 1–October 30
- Migratory Bird (HIP) Permit—**REQUIRED**
- Shotgun capable of carrying no more than 3 shells—**REQUIRED**
- Federal Migratory Bird (Duck) Stamp—**NOT REQUIRED**
- Nontoxic Shot—**NOT REQUIRED**
- Shot Size: No person shall take mourning doves while in possession of shot larger than two tenths (0.2 inches) in diameter (size T).

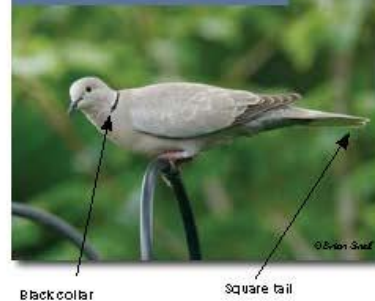
Eurasian-collared doves are larger than mourning doves. They have a black collar on the top part of the neck, pale gray coloration, and dark primary feathers. These doves are an introduced species that have recently expanded their range into Idaho. Eurasian-collared doves will not count as part of your aggregate bag of mourning doves as long as they are identifiable.

Eurasian-collared doves may be taken in any amounts and at any time by holders of the appropriate valid Idaho hunting or combination hunting license, provided such taking is not in violation of state, county, or city laws, ordinances or regulations.

Mourning Dove



Eurasian-collared Dove



Dove

American Crow Seasons and Limits

Daily Bag & Possession Limit: No Limits

- **October 1, 2016 - January 31, 2017**

No person shall take American crows:

- From one-half hour after sunset to one-half hour before sunrise.
- With trap, snare, net, rifle, pistol or a shotgun using shells exceeding three and one-half (3½) inches maximum length.
- From boats or other craft having a motor attached UNLESS the motor is completely shut off and forward progress has ceased, or the boat is drifting naturally or it is propelled only by paddle, oars, or pole, or it is beached, moored, or resting at anchor.

Areas Closed to Hunting

Areas closed to hunting of upland game birds are also closed to hunting of American crows.



American Crow

Sandhill Crane Seasons and Limits

Daily Bag Limit: 2 Season Limit: 2

Sandhill crane hunting occurs in eastern Idaho. One of the purposes of these hunts is to help reduce crop damage.

- September 1-15 or September 16-30 depending on tag type.
- Sandhill Crane Tag—**REQUIRED**
- Migratory Bird (HIP) Permit—**REQUIRED WITH FIRST TAG ONLY**
- Federal Migratory Bird (Duck) Stamp—**NOT REQUIRED**
- Shotgun capable of carrying no more than 3 shells—**REQUIRED**
- Nontoxic Shot—**NOT REQUIRED**
- Shot Size: No person shall take sandhill crane while in possession of shot larger than two tenths (0.2 inches) in diameter (size T).

Tags will be available for purchase at 10 am MDT on August 1, first-come, first-served.

Tagging

Immediately after any sandhill crane is harvested, the tag must be validated and securely attached. The tag must remain attached so long as the sandhill crane is in transit or storage.

Species Identification

To legally transport any migratory game bird, one feathered wing or head must be left attached at all times while being transported until they reach their final destination.

Know Your Crane!

Please note the age of the crane you harvested. This data is important for crane harvest management.

An adult sandhill crane stands nearly four feet tall. Grayish plumage is accented by a featherless red head patch. Juveniles have tannish brown heads with no red.



AREA 1

- Includes all of Bear Lake County and all of Caribou County except that portion lying within the Grays Lake Basin.

AREA 2

- Includes all of Teton County except that portion lying west of state Highway 33 and south of Packsaddle Road (West 400 North) and north of the North Cedron Road (West 600 South) and east of the west bank of the Teton River.

AREA 3

- Includes all of Fremont County except the Chester Wetlands Wildlife Management Area.

AREA 4

- Includes all of Jefferson County except that portion beginning at the 1400 E/1750 N intersection, then west following the Mud Lake WMA boundary to the 1100 E/WMA Sparks Canal Road, then north and east following the Sparks Canal Road to the WMA North Bluff Road intersection, then east following the North Bluff Road to the WMA Lower Lake Road, then drawing a straight line south to the beginning point of 1750 N/1400 E intersection.

AREA 5

- Includes Bannock County east of Interstate-15 and south of U.S. Highway 30; and all of Franklin County.

Sandhill Crane Seasons, Limits and Tags

Hunt Area	Season	Tags
1-Bear Lake	September 1-15	200
	September 16-30	100
2-Teton	September 1-15	30
3-Fremont	September 1-15	35
	September 16-30	35
4-Jefferson	September 1-15	20
	September 16-30	20
5-Swan Lake	September 1-15	25

Note: Daily limit is 2 for all hunts. The season limit is 2.

Submitted by:

Wayne Wakkinen
Regional Wildlife Manager

Clay Hickey
Regional Wildlife Manager

Rick Ward
Regional Wildlife Manager

Regan Berkley
Regional Wildlife Manager

Mike McDonald
Regional Wildlife Manager

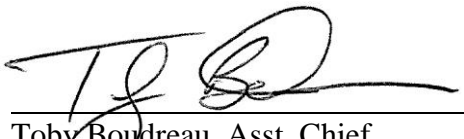
Zach Lockyer
Regional Wildlife Manager

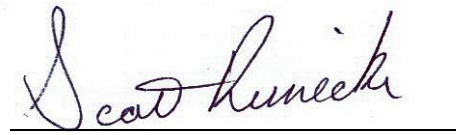
Curtis Hendricks
Regional Wildlife Manager

Greg Painter
Regional Wildlife Manager

David Smith
Grants Specialist

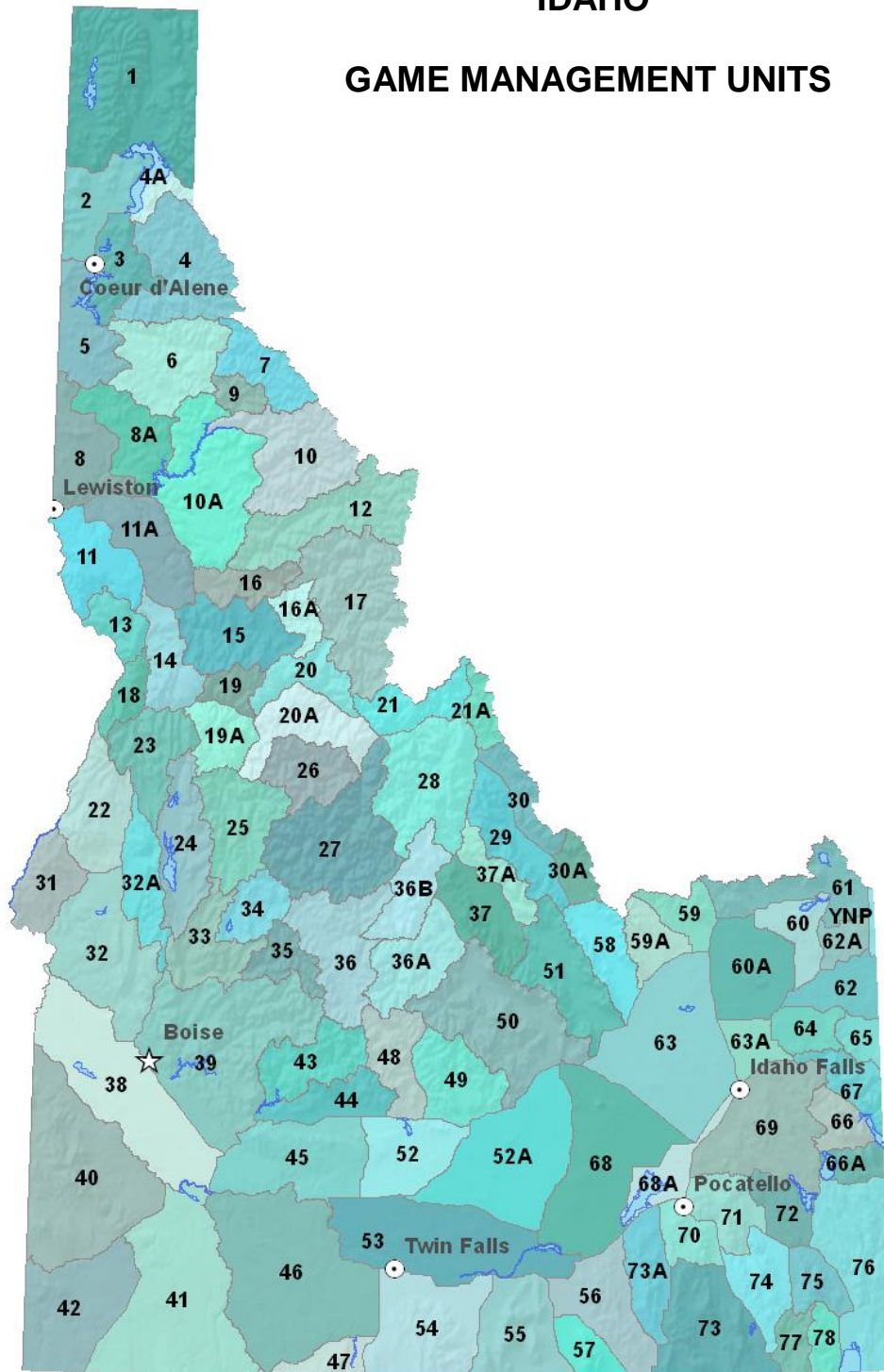
Approved by: IDAHO DEPARTMENT OF FISH AND GAME


Toby Boudreau, Asst. Chief
Bureau of Wildlife


Scott Reinecker, Chief
Bureau of Wildlife

IDAHO

GAME MANAGEMENT UNITS



FEDERAL AID IN WILDLIFE RESTORATION

The Federal Aid in Wildlife Restoration Program consists of funds from a 10% to 11% manufacturer's excise tax collected from the sale of handguns, sporting rifles, shotguns, ammunition, and archery equipment. The Federal Aid program then allots the funds back to states through a formula based on each state's geographic area and the number of paid hunting license holders in the state. The Idaho Department of Fish and Game uses the funds to help restore, conserve, manage, and enhance wild birds and mammals for the public benefit. These funds are also used to educate hunters to develop the skills, knowledge, and attitudes necessary to be responsible, ethical hunters. Seventy-five percent of the funds for this project are from Federal Aid. The other 25% comes from license-generated funds.

